

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P388328

Luminaire Tested: **24CZ2-110VHE-SQR-UNV-L940-CD2-U**

Issue Date: 2/28/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P388328
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)
Test Lab: INNOVATION CENTER (G2)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-110VHE-SQR-UNV-L940-CD2-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9104.6 lumens
Efficiency: N/A
Efficacy: 117.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

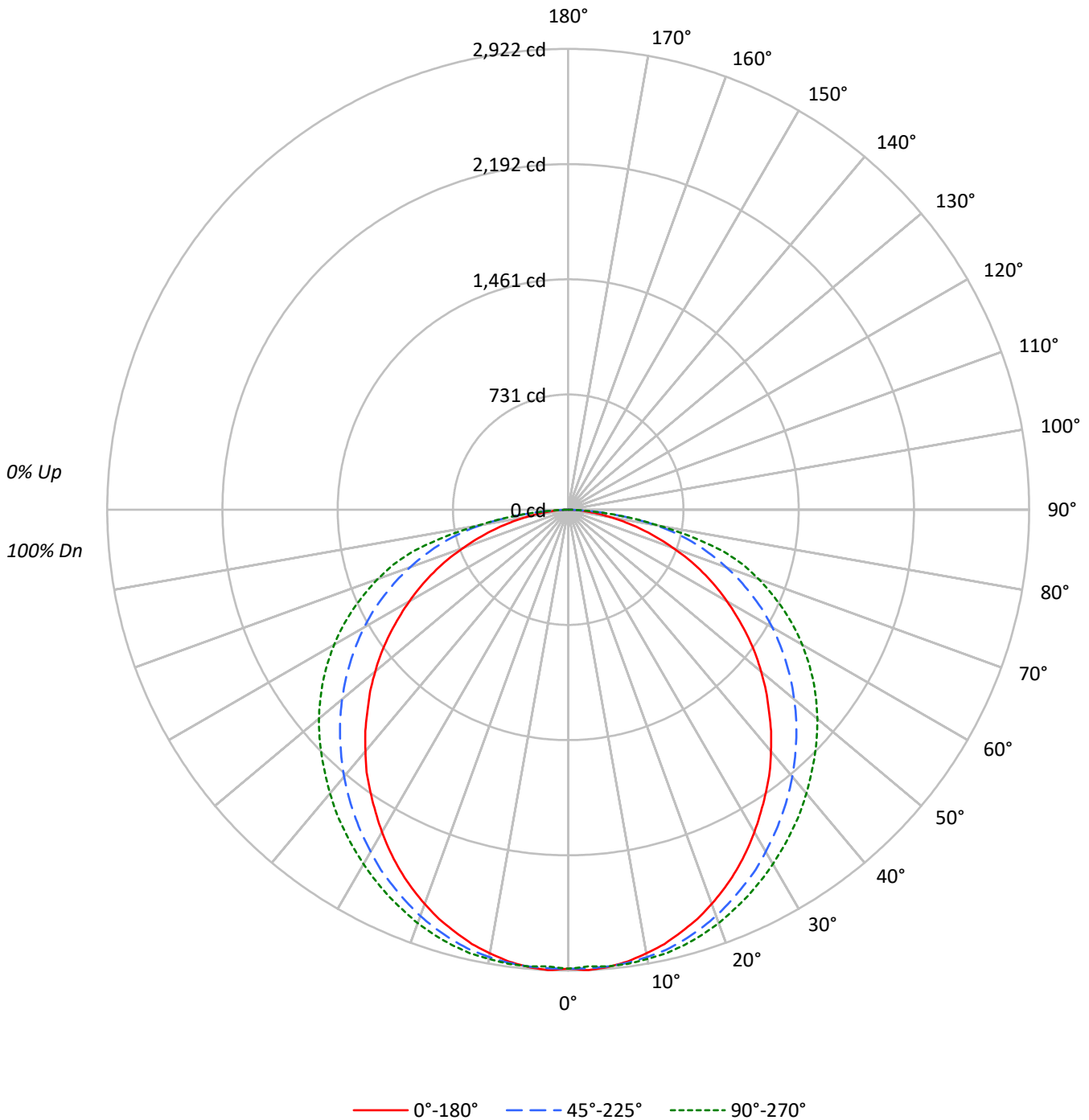
Input Watts (W): 77.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3916	3916	3916
5°	3931	3927	3927
10°	3902	3935	3951
15°	3861	3937	3979
20°	3810	3926	3995
25°	3745	3905	4008
30°	3667	3891	4031
35°	3590	3881	4069
40°	3512	3881	4124
45°	3421	3890	4205
50°	3342	3914	4317
55°	3244	3956	4450
60°	3131	4021	4612
65°	2996	4097	4805
70°	2779	4199	5050
75°	2516	4345	5283
80°	2120	4356	4543
85°	1624	3296	3296



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	276.3	3.0
10°-20°	794.8	8.7
20°-30°	1207.3	13.3
30°-40°	1468.5	16.1
40°-50°	1563.4	17.2
50°-60°	1489.1	16.4
60°-70°	1245.3	13.7
70°-80°	830.3	9.1
80°-90°	229.7	2.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2278.3	25.0
0°-40°	3746.8	41.2
0°-60°	6799.3	74.7
0°-90°	9104.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9104.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2910	2910	2910	2910	2910	
5°	2910	2892	2907	2907	2907	276
15°	2772	2778	2826	2847	2856	782
25°	2522	2556	2631	2676	2700	1161
35°	2186	2249	2363	2441	2477	1368
45°	1798	1894	2044	2159	2210	1390
55°	1383	1503	1687	1834	1897	1236
65°	941	1079	1287	1446	1509	930
75°	484	637	836	977	1016	513
85°	105	195	214	210	214	127
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2910.3	2910.3	2910.3	2910.3	2910.3
2.5°	2922.3	2901.3	2910.3	2910.3	2898.2
5°	2910.3	2892.2	2907.3	2907.3	2907.3
7.5°	2889.2	2874.2	2898.2	2904.3	2904.3
10°	2856.2	2850.1	2880.2	2889.2	2892.2
12.5°	2820.1	2817.1	2859.2	2871.2	2880.2
15°	2772.0	2778.0	2826.1	2847.1	2856.2
17.5°	2720.9	2732.9	2787.0	2817.1	2826.1
20°	2660.7	2678.8	2741.9	2772.0	2790.0
22.5°	2594.6	2621.7	2687.8	2723.9	2744.9
25°	2522.4	2555.5	2630.7	2675.8	2699.8
27.5°	2444.3	2486.4	2573.5	2624.7	2648.7
30°	2360.1	2408.2	2504.4	2564.5	2594.6
32.5°	2272.9	2330.0	2435.2	2501.4	2537.5
35°	2185.7	2248.8	2363.1	2441.3	2477.3
37.5°	2098.5	2161.7	2287.9	2372.1	2417.2
40°	1999.3	2074.5	2209.8	2303.0	2348.1
42.5°	1903.1	1984.3	2128.6	2230.8	2278.9
45°	1797.9	1894.1	2044.4	2158.7	2209.8
47.5°	1701.7	1797.9	1960.2	2080.5	2137.6
50°	1596.4	1698.7	1870.0	2002.3	2062.4
52.5°	1494.2	1599.4	1779.8	1921.1	1981.3
55°	1383.0	1503.2	1686.6	1834.0	1897.1
57.5°	1271.7	1401.0	1590.4	1743.8	1806.9
60°	1163.5	1295.8	1494.2	1647.6	1713.7
62.5°	1055.3	1187.6	1395.0	1551.3	1614.5
65°	941.0	1079.3	1286.8	1446.1	1509.3
67.5°	826.8	971.1	1178.5	1337.9	1398.0
70°	706.5	859.9	1067.3	1223.6	1283.8
72.5°	595.3	748.6	953.1	1106.4	1163.5
75°	484.0	637.4	835.8	977.1	1016.2
77.5°	375.8	529.1	706.5	799.7	808.7
80°	273.6	417.9	562.2	589.3	586.3
82.5°	183.4	312.7	387.8	390.8	399.9
85°	105.2	195.4	213.5	210.5	213.5
87.5°	42.1	69.1	60.1	45.1	45.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)